

Alicja Zemanek

ORCID [0000-0002-3335-0723](https://orcid.org/0000-0002-3335-0723)

Botanic Garden, Faculty of Biology, Jagiellonian University (Kraków, Poland)

alicja.zemanek@uj.edu.pl

Piotr Köhler

ORCID [0000-0001-8713-0817](https://orcid.org/0000-0001-8713-0817)

Institute of Botany, Faculty of Biology, Jagiellonian University (Kraków, Poland)

piotr.kohler@uj.edu.pl

*In memory
of Polish botanists
who explored
Lithuanian flora*

Botany at Stefan Batory University in Vilna (Wilno, Vilnius) (1919–1939)

Abstract

The university in Vilna (in Polish: Wilno, now: Vilnius, Lithuania), founded in 1579, by Stefan Batory (Stephen Báthory), King of Poland and Grand Duke of Lithuania, was a centre of Polish botany in 1780–1832 and 1919–1939.

PUBLICATION INFO		e-ISSN 2543-702X ISSN 2451-3202		 DIAMOND OPEN ACCESS
Zemanek, Alicja; Köhler, Piotr 2019: Botany at Stefan Batory University in Vilna (Wilno, Vilnius) (1919–1939). <i>Studia Historiae Scientiarum</i> 18, pp. 93–137. DOI: 10.4467/2543702XSHS.19.005.11011 .				
RECEIVED: 29.12.2018 ACCEPTED: 05.06.2019 PUBLISHED ONLINE: 15.11.2019		ARCHIVE POLICY Green SHERPA / RoMEO Colour	LICENSE 	 Crossref Similarity Check Powered by iThenticate
WWW	http://www.ejournals.eu/sj/index.php/SHS/ ; http://pau.krakow.pl/Studia-Historiae-Scientiarum/			

In the latter period the university functioned under the Polish name Uniwersytet Stefana Batorego (in English: Stefan Batory University). It comprised six departments connected with botany (General Botany, Pharmacognosy and Cultivation of Medicinal Plants, Plant Taxonomy, Botanical Garden, Garden of Medicinal Plants, and Natural History Museum).

There worked such distinguished scientists, as: Jakub Mowszowicz (1901–1983), phytogeographer and phytosociologist; Jan Muszyński (1884–1957), botanist and pharmacist; Bronisław Szakien (1890–1938), cytologist and mycologist; Piotr Wiśniewski (1881–1971), physiologist; and Józef Trzebiński (1867–1941), mycologist and phytopathologist. Ca. 300 publications (including ca. 100 scientific ones) were printed in the period investigated, dealing mainly with morphology and anatomy, cytology, plant physiology, floristics (floristic geography of plants), systematics (taxonomy) of vascular plants, mycology and phytopathology, ecology of plant communities (phytosociology), as well as ethnobotany, and history of botany. Stefan Batory University was also an important centre of teaching and popularization of botany in that region of Europe.

The aim of the article is to describe the history of botany at the Stefan Batory University in 1919–1939.

Keywords: *botanical research, history of botany, Lithuania, Poland, Polish botanists, the interwar period, twentieth century, Vilnius, Wilno, University in Vilna, Stefan Batory University, Jakub Mowszowicz, Jan Muszyński, Bronisław Szakien, Piotr Wiśniewski, Józef Trzebiński*

Botanika na Uniwersytecie Stefana Batorego w Wilnie (Vilna, Vilnius) (1919–1939)

Abstrakt

Uniwersytet w Wilnie (w języku angielskim: Vilna, obecnie: Vilnius w Republice Litewskiej), założony w 1579 r. przez Stefana Batorego, króla Polski i wielkiego księcia Litwy, był ośrodkiem polskiej botaniki w latach 1780–1832 oraz 1919–1939. W tym ostatnim okresie funkcjonował pod nazwą Uniwersytet Stefana Batorego (w języku angielskim: Stefan Batory University).

W latach 1919–1939 zorganizowano następujące zakłady związane z botaniką: Botaniki Ogólnej, Farmakognozji i Hodowli Roślin Lekarskich, Systematyki Roślin, Ogród Botaniczny, Ogród Roślin Lekarskich oraz Muzeum Przyrodnicze.

W ośrodku wileńskim pracowali wybitni uczeni, m.in. Jakub Mowszowicz (1901–1983), fitogeograf i fitosocjolog; Jan Muszyński (1884–1957), botanik i farmaceuta; Bronisław Szakien (1890–1938), cytolog i mykolog; Piotr Wiśniewski (1881–1971), fizjolog oraz Józef Trzebiński (1867–1941), mykolog i fitopatolog. Badacze roślin ogłosili drukiem ok. 300 publikacji (w tym ok. 100 naukowych) dotyczących głównie morfologii i anatomii, cytologii, fizjologii roślin, florystyki (florystycznej geografii roślin), systematyki (taksonomii) roślin naczyniowych, mykologii i fitopatologii, ekologii zbiorowisk roślinnych (fitosocjologii), a także etnobotaniki i historii botaniki. Uniwersytet Stefana Batorego był również ważnym ośrodkiem nauczania i popularyzacji botaniki w tym regionie Europy.

Celem artykułu jest opracowanie historii botaniki na Uniwersytecie Stefana Batorego w latach 1919–1939.

Słowa kluczowe: *badania botaniczne, historia botaniki, Litwa, okres międzywojenny, polscy botanicy, Polska, Wilno, Uniwersytet w Wilnie, Uniwersytet Stefana Batorego, Jakub Mowszowicz, Jan Muszyński, Bronisław Szakien, Piotr Wiśniewski, Józef Trzebiński*

1. Introduction

Vilna is a multi-national town situated in Central-Eastern Europe. The town has undergone turbulent political changes, and belonged to various countries: Lithuania, Polish-Lithuanian Commonwealth, Russia, Poland, the Soviet Union, Lithuania, the Soviet Union, Nazi Germany, the Soviet Union, and now – to Lithuania. The university in Vilna (Wilno, Vilnius), now Lithuanian Vilniaus Universitetas, founded in 1579 by Stefan Batory (Stephen Báthory), King of Poland and Grand Duke of Lithuania, was one of the first centres of Polish botany in 1780–1832. In 1780, the Chair of Natural History was established, in 1781¹ – the Botanical Garden, and in 1802 – the Chair of Botany. The employees

¹ Botanical Garden, created in 1781 as an additional unit of the Chair of Natural History, was opened in 1782.

of the university² conducted studies on vegetation of lands belonging today to the north-eastern Poland, western Belarus, and Lithuania.³ In 1795, Poland lost independence, divided between Austria, Prussia, and Russia. The former Vilna University was closed on the orders of the Russian Tsar in 1832. Botany was still taught in Vilna at the Imperial Medical-Surgical Academy. After its closure in 1842, botany was cultivated for the next 77 years by a few amateurs.

After Poland had regained freedom in 1918, the university was reopened on 28 August 1919 under the name Uniwersytet Stefana Batorego (in English: Stefan Batory University). From June to October 1920, the University was closed, because of the Soviet occupation, and resumed its activities only after the victory of the Polish armed forces. The preparatory and organizational work related to the launch of botanical studies was started by Piotr Wiśniewski (1884–1971), former professor at the Warsaw University of Life Sciences.⁴ Wiśniewski was one of the organizers of the Stefan Batory University. In the academic year 1919/1920, he was also the first dean of the Faculty of Mathematics and Natural Sciences, which included the science of plants.⁵ The faculty began work on 19 September 1919, when the first meeting of the Faculty Council was held.

The short period between 1919 and 1939, when the University functioned, can be referred to as a heroic time – its organizers, and later its employees had to cope with a multitude of problems, starting from political, through personal to financial.⁶ Nevertheless, the patriotic enthusiasm of scientists accompanying the resurrection of Polish science helped to overcome gradually the difficulties. On 15 December 1939, the University was closed by the authorities of the Republic of Lithuania (Vilna was transferred to Lithuania by the Soviet Union occupying the city). After the Second World War, as a result of changed borders the town was included in the Soviet Union, and from 1990 – in the Republic of Lithuania.

² At first among others Frenchman Jean Emmanuel Gilibert (1741–1814), later the Poles: Rev. Stanisław Bonifacy Jundzill (1761–1847), and Józef Jundzill (1794–1877).

³ Grębecka 1979; 1998.

⁴ Siedlecki 1929, p. 66 (8).

⁵ LCVA [see footnote 10], I Bb 784.

⁶ Mienicki 1929, p. 125(11); Jaczewski 1978, pp. 39–40.



Fig. 1. Jakub Mowszowicz. University of Łódź Archives; personal files.

Until recently, the main source of knowledge about botany in the University was the papers in Polish by Jakub Mowszowicz (1901–1983) (Fig. 1), written mainly on the basis of his own memories (without archival source research). In some short articles in Lithuanian by Jolita Klimavičiūtė selected issues of botany in the University concerned, among many topics, the history of botany in Lithuania (including Vilna) in the interwar period.⁷ In her monograph, the author discussed (only on 15 pages and again in Lithuanian) the above issues a bit more extensively but based on few archival sources.⁸

Despite the existence of the above-mentioned studies, the detailed history of botany at the Stefan Batory University in the interwar period has been still not sufficiently researched and described so far. The aim of this study is to write both the external (institutions, collections, in some extent also biographies) and the internal (branches, methods, published results) history of botany in the University on the basis of very numerous archival documents, and

⁷ Klimavičiūtė 1997; 1998a; 1998b.

⁸ Klimavičiūtė 2002, pp. 50–64.

printed works. Electronic copies of archival materials were obtained owing to the interdisciplinary research project that has been launched with the purpose to elaborate the history of science at the Stefan Batory University.⁹ The archival materials are kept in Lietuvos Centrinis Valstybės Archyvas in Vilna.¹⁰

2. Botanical and other departments studying plants

Several research units involved in the studies of plants operated in the Stefan Batory University (Table 1). Scientific laboratories and teaching rooms of particular departments had been furnished gradually, after the accommodation and subsidies for repairs were acquired.

Table 1. Organizational units connected with botany
in Stefan Batory University (SBU) in Vilna

Year of foundation	Names ¹¹	Heads (years of life) – years of employment in SBU
1919	Department of General Botany (Department of Botany I)	Piotr Wiśniewski (1884–1971) – 1919–1939
(1919 – choice of area) 1920	Botanical Garden	Piotr Wiśniewski – 1919–1923 Józef Trzebiński (1867–1941) – 1924–1937 Franciszek Ksawery Skupieński (1888–1962) – 1937–1939

⁹ Research Project of the Ministry of Science and Higher Education in Poland – NPRH/912-Bibl. *Hinc itur ad astra* – executed by Nicolaus Copernicus University in Toruń in cooperation with Vilnius University.

¹⁰ Lietuvos Centrinis Valstybės Archyvas [in English: Lithuanian Central State Archives in Vilnius is quoted in this paper as LCVA. Since all archival materials derive from only one file entitled ‘F. 175 Akta Uniwersytetu Stefana Batorego w Wilnie’ [F. 175 Files of the Stefan Batory University in Vilna] – the file title has been omitted in the following notes.

¹¹ The most frequently used name of departments (in the brackets other names used in particular years).

Table 1 cont.

1921	Department of Pharmacognosy and Cultivation of Medicinal Plants	Jan Muszyński (1884–1957) – 1921–1939
1923	Garden of Medicinal Plants	Jan Muszyński – 1923–1939
1924	Department of Plant Taxonomy (Department of Botany II, Department of Agricultural Botany, Department of Taxonomy and Plant Geography)	Józef Trzebiński – 1924–1937 Franciszek Ksawery Skupieński – 1937–1939
1928 (1931 – opening)	Natural History Museum	Jan Prüffer (1890–1959) – 1928–1939

2.1. Department of General Botany

In 1919, the Department of General Botany¹² was organized by Piotr Wiśniewski (Fig. 2), a plant physiologist, the first Dean of the Faculty of Mathematics and Natural Sciences (academic years 1919–1920 and 1926–1927), who also created the Botanical Garden (see below). Wiśniewski obtained his doctoral degree (1910) at the Lwów University (now: Lviv, Ukraine) on the basis of a thesis on experimental plant anatomy. Later, he visited Dutch and German botanical laboratories. After returning to his homeland, he held the post of Professor (1913–1919) in the Industrial-Agricultural Courses (from 1916 – Higher Agricultural School) in Warsaw. In 1919–1939, he was a Professor at the Vilna University, obtaining the title of Full Professor in 1920. Piotr Wiśniewski was a devoted academic teacher, and created the so-called Vilna botanical school.¹³ Twelve assistant lecturers were appointed in the Department, one to several per year (Table 2). Very low salaries forced them to take additional jobs, usually in primary or secondary schools.¹⁴

¹² Department operated under different names listed in Table 1.

¹³ In 1944–1959, Wiśniewski was a Full Professor at the Maria Curie-Skłodowska University in Lublin. He died in 1971 in Lublin (Kurancowa 1970, Paszewski 1971, Salata 1995).

¹⁴ Köhler 2016 a, b, c, d.



Fig. 2. Piotr Wiśniewski. LCVA I Bb nr 784 (Piotr Wiśniewski).

The Department of General Botany was home to the studies in the fields of plant physiology, anatomy, cytology, floristics, phytosociology, and the history of botany.¹⁵ It also housed botanical scientific collections (chiefly herbarium, see below), as well as teaching aids.¹⁶

Table 2. Assistants employed in the Department of General Botany SBU

Assistants (years of life)	Name of post and years of fulfillment	Later employment
Stefan Kownas (1898–1978)	Volunteer Assistant 1938–1939	after WWII Professor in the Higher Agricultural School in Szczecin ¹⁷
Jakub Mowszowicz (1901–1983)	Volunteer Assistant 1936–1939, in 1936 Ph.D. in SBU	after WWII Professor in University of Łódź ¹⁸

¹⁵ LCVA I Ab 152, I Ab 391, I Bb 784.

¹⁶ LCVA I Ab 314, I Ab 391.

¹⁷ Köhler 2016a.

¹⁸ Hereźniak, Czyżewska 2000.

Table 2 cont.

Anna Niekrasz (1896–1973)	Assistant 1929–1931, Senior Assistant 1 Jan 1931–15 Dec 1939	after WWII research worker in the Nicolaus Copernicus University in Toruń, and in the University of Łódź ¹⁹
Maria Oszurkówna (Bagieńska) (?–?)	Assistant since 1 Nov 1925 during academic year 1926/27 (maybe until the end of academic year 1928/1929)	teacher ²⁰
Helena Peksza (née Korwin- Kurkowska) (1900– 1971)	Assistant 1924–1928	teacher, after WWII research worker of the University of Łódź ²¹
Anna Przewłocka (née Moksiewi- czówna) (1897–?)	Assistant since 1 Jan 1921, Senior Assistant 1 Oct 1923–31 Dec 1925 ²²	later fate unknown
Irena Renigerówna (?–?)	Assistant 1 Oct 1925– 30 Sep 1929 ²³	later fate unknown
Czesława Rudnicka (?–?)	Assistant 1 Dec 1922–30 Sep 1923 ²⁴	later fate unknown
Antonina Sienicka (1898–1979)	In 1931 Ph.D. in Warsaw University, Assistant 1929–1938, Assistant Professor 1 Nov 1938–15 Dec 1939	after WWII research worker in the Nicolaus Copernicus University in Toruń, later Associate Professor in the Higher Agricultural School in Szczecin ²⁵

¹⁹ Köhler 2016b.²⁰ LCVA I Ab 391, VII B.²¹ Mowszowicz 1976.²² LCVA I Ab 56, VII B 54, VII B 57, VII B 58.²³ LCVA I Ab 391, F. 175 VII B 59.²⁴ LCVA VII B 56.²⁵ Köhler 2016c.

Table 2 cont.

Assistants (years of life)	Name of post and years of fulfillment	Later employment
Witold Sławiński (1888–1962)	Senior Assistant 15 Sep 1919–30 Sep 1923	after WWII Professor in the Maria Curie-Skłodowska University in Lublin, in the Warsaw University of Technology, and in the Medical Academy in Białystok ²⁶
Bronisław Szakien (1890–1938)	Assistant since 1 Jun 1921, Senior Assistant since 1 Oct 1925, Assistant Professor since 1 Oct 1935, Ph.D. – 1927, 'habilitation' in SBU – 1937 ²⁷	
Kazimiera Wilczyńska (née Urbanowiczówna) (1897–1980)	Assistant since 1929/1930, Senior Assistant 1 Oct 1930– 15 Dec 1939	after WWII worked, among others, in the Nicolaus Copernicus University in Toruń ²⁸

2.2. Department of Plant Taxonomy

In 1924, the Department of Plant Taxonomy²⁹ started its activities. It was established by a mycologist and phytopathologist Józef Trzebiński (1867–1941) (Fig. 3). In 1897, he obtained the degree of candidate in life sciences at the Imperial University of Warsaw. In 1903, he was conferred a doctoral degree, and in 1920 a post-doctoral degree ('habilitation') in botany in the field of phytopathology of the Jagiellonian University in Kraków. He visited many plant protection stations in western countries of Europe, and in Russia. In 1922–1937, Trzebiński was

²⁶ Gątkiewiczowa 1963.

²⁷ Köhler 2016d.

²⁸ LCVA 1 (I Bb) 1013, VII B 52.

²⁹ Department operated under different names – see Table 1.



Fig. 3. Józef Trzebiński in his laboratory. Archives of the Polish Academy of Sciences, file reference number: 105.

appointed a Professor in the Vilna University, and from 1923 – a Full Professor. He headed the Department of Plant Taxonomy and the Botanical Garden. In the academic year 1925–1926, he was the Dean of Faculty of Mathematics and Natural Sciences. In 1928, the Mycological Section of the Plant Protection Station in Vilna, managed also by Professor Trzebiński, began its work in association with the Department of Plant Taxonomy. He retired in 1937.³⁰

³⁰ In 1937, Trzebiński was awarded the title of doctor *honoris causa* of the Major School of Rural Economy in Warsaw. He died in Vilna in 1941 (Köhler, Majewski 2016).

The successor of Trzebiński was Franciszek Ksawery Skupieński (1888–1962) – a mycologist, and a researcher of slime moulds. In 1920, he obtained the degree of *docteur des sciences naturelles* at the Sorbonne in Paris, in 1929 – a post-doctoral degree (‘habilitation’) at the Faculty of Mathematics and Natural Sciences of the University of Warsaw (UW). He worked at the UW (1920–1937) and combined it with employment in the Warsaw Polytechnic (1933–1937). From 1937 to 1939, Skupieński held a professorship in botany at the Vilna University.³¹

Ten assistant lecturers were appointed in the Department of Plant Taxonomy (Table 3). The research area of this unit covered principally mycology, phytopathology, floristics, and phytosociology.³² It also gathered botanic scientific collections (chiefly herbarium, see below), as well as teaching aids.³³

Table 3. Assistants employed in Department of Plant Taxonomy SBU

Assistants (years of life)	Name of post and years of fulfillment	Later employment
Zofia Fiedorowiczówna (1895–1983?)	Assistant since 15 May 1924 until academic year 1928/1929 ³⁴	later fate unknown
Ryszard Kruszyński (1908–1940)	Assistant Volunteer since 1935/1936 until 1939, employed also in Plant Protection Station in Vilna	murdered by NKVD in Kharkiv ³⁵
Irena Michalska (née Malinowska) (1910–2000)	Assistant 1 Nov 1935– 15 Dec 1939	after WWII Professor in the Institute of Animal Physiology and Nutrition, Polish Academy of Sciences, in Bydgoszcz ³⁶

³¹ From 1945 to 1960, Skupieński was a Professor in the University of Łódź. He died in Łódź in 1962 (Konarski 1998).

³² LCVA I Ab 152, I Ab 391, I Bb 784.

³³ LCVA I Ab 314, I Ab 391, VII B 232.

³⁴ LCVA I Ab 391, VII B 57, VII B 58, VII B 59.

³⁵ LCVA I Ab 314, VII B 52, VII B 200, VII B 232; Majewski 1982; 2016, p. 120.

³⁶ LCVA A 14 no. 299, VII B 52, VII B 161, VII B 197, VII B 198, VII B 232.

Table 3 cont.

Andrzej Michalski (1904–1973)	Deputy Assistant since 1 Oct 1930, Senior Assistant 1 Sep 1936 (maybe already since 1935)–15 Dec 1939, he was also Inspector i.e. Chief Gardener of the SBU Botanical Garden) since 1936	after WWII research worker in the State Agricultural Scientific Institute – head of the Mycological Division in Bydgoszcz, head of the Bydgoszcz Division of Institute of Plant Protection, National Research Institute, and its Phytopathological Unit ³⁷
Irena Morawska-Boguszewska (?–?)	Assistant 1 Apr–31 Dec 1926, and 1930/1931–1932/1933 (maybe continuously), Senior Assistant 1933–1935, Ph.D. in SBU in 1932 or in 1933 ³⁸	later fate unknown
Nadzieja Rojecka (1898–1986)	Assistant since 1 Oct 1931, Senior Assistant since 1 Sep 1935 probably until 15 Dec 1939, seasonal Assistant in the Plant Protection Station in Vilna in 1931–1935	after WWII research worker in the Nicolaus Copernicus University in Toruń, Assistant Professor in the State Agricultural Scientific Institute (Państwowy Instytut Naukowy Gospodarstwa Wiejskiego) in Puławy, and the Puławy Division of the Institute of Plant Protection, National Research Institute ³⁹

³⁷ Sokołowska-Rutkowska, Piszcz 1975.³⁸ LCVA I Ab 314, 1(I A) B 955, VII B 52, VII B 59; Sokołowska-Rutkowska, Piszcz 1975.³⁹ Sokołowska-Rutkowska 1988.

Table 3 cont.

Assistants (years of life)	Name of post and years of fulfillment	Later employment
Henryk Rylski (?–?)	Deputy Assistant 1924/1925–1926/27 ⁴⁰	later fate unknown
Witold Sławiński	Assistant 1 Oct 1923–31 Dec 1925	see Table 2 ⁴¹
Irena Sokółowska- Rutkowska (1904–?)	Assistant since 15 Oct 1925 until the end of aca- demic year 1929/1930	teacher of primary school in Dubno (now in Ukraine), after WWII lived in Warsaw ⁴²
Antoni Zieliński (?–?)	Deputy Assistant 1928/1929 ⁴³	later fate unknown

2.3. Department of Pharmacognosy and Medicinal Plant Breeding

In the Department of Pharmacognosy and Medicinal Plant Breeding, organized in 1921 by a pharmacist and botanist Jan Muszyński (1884–1957) (Fig. 4), apart from other issues, was a place of study of useful plants, chiefly medicinal species, and ethnobotany.⁴⁴ Jan Muszyński graduated in 1917 from the Dorpat University (now: Tartu, Estonia) with a Master of Science degree (equivalent to a doctoral degree in the Austro-Hungarian Monarchy). From 1921 to 1939, he worked in the Vilna University, starting in 1923, as an associate Professor and, from 1937, as a full Professor of pharmacognosy and breeding of medicinal plants. Muszyński was the Director of the University Pharmaceutical Study from the academic year 1923–1924.⁴⁵ The Garden of Medicinal Plants was established in 1923, on approx. 30,000 square meters, situated near the Botanical Garden.⁴⁶

⁴⁰ LCVA VII B 52.

⁴¹ Gątkiewiczowa 1963.

⁴² LCVA I Ab 391, VII B 48, VII B 52, VII B 59.

⁴³ LCVA I Ab 391.

⁴⁴ LCVA I Ab 56, VII B 54.

⁴⁵ In 1942, Muszyński moved to Warsaw, where he was active in clandestine teaching. From 1945, he lived in Łódź, where he organised the Faculty of Pharmacy at the Łódź University (UL) of which he was the first Dean (from 1945 to 1951). He died in Łódź in 1957 (RembIELiński 1957).

⁴⁶ Rydzewski 1929, p. 405 (29).



Fig. 4. Jan Muszyński. The National Digital Archives (Warsaw, Poland), file reference number: 1-N-403.

Herbaria and other botanical collections

Each of the two botanical departments independently accumulated scientific collections, including herbaria. The Department of General Botany was the first to be organized. Probably for this reason, this Department received herbaria from the Vilna Medical Society and from the natural museum at the Vilna Public Library, where the herbaria had been kept earlier.⁴⁷ They included collections by botanists associated with the former University of Vilna: Willibald Besser (1784–1842), Edward Karol Eichwald (1795–1876), Józef Fiedorowicz (1777–1860), Stanisław Batys Górski (Gorski) (1802–1864), Jerzy Pabreż (1771–1849), Jan Fryderyk Wolfgang (1775–1859), or botanists with whom S. B. Górski exchanged dried plants, e.g. Wojciech Jastrzębowski (1799–1882).⁴⁸ The collections by botanists of the 19th–20th centuries, as Maria

⁴⁷ Mowszowicz 1957, p. 16.

⁴⁸ Köhler 1994.



Fig. 5. Bronisław Szakien. LCVA I Bb nr 637.

Burhardtówna, Vsevolod Izmailskiy, S. Lavrov, Wacław Hryniewski, January Kołodziejczyk and Józef Niekrasz, were acquired as deposits of the Society of Friends of Sciences based in Vilna.⁴⁹ The interwar period witnessed the arrival of collections accumulated by Piotr Wiśniewski, Konstanty Prószyński, Bronisław Szakien (Fig. 5), Jakub Mowszowicz, and students.⁵⁰ Unfortunately, archival sources do not contain precise data on these collections.

The beginning of the herbarium at the Department of Plant Taxonomy was a collection brought by Professor Józef Trzebiński from Puławy.⁵¹ The collection consisted of samples of seeds, fruits, timbers and macromycetes.⁵² In the interwar period, the herbarium of the Department was enlarged by collections accumulated by its employees as well as graduate students (Table 4), for example Nadzieja Rojecka (Fig. 6).

⁴⁹ Mowszowicz 1966 pp. 106–107.

⁵⁰ LCVA VII B 232.

⁵¹ LCVA VII B 52.

⁵² Mowszowicz 1966 pp. 109, 111; Rydzewski 1929, p. 334.



Fig. 6. Nadzieja Rojecka. Archives of the Polish Academy of Sciences, Ananiasz Rojecki files, file reference number: III-230, j. 72.

Table 4. Collections donated to the Herbarium of the Department of Plant Taxonomy SBU

Year	Donator	Area	Donations
1922 ⁵³	Józef Trzebiński	no data	samples of seeds, fruits, timbers and macromycetes
1924 ⁵⁴	Józef Trzebiński	surroundings of Łowicz	flowering plants
	Witold Sławiński	Savoy Alps and Piedmont	flowering plants
	Zofia Fiedorowiczówna	the Dzisna district (now in Belarus)	zoocecidia

⁵³ Mowszowicz 1966, pp. 109, 111; Rydzewski 1929, p. 334.

⁵⁴ LCVA I Ab 152.

Table 4 cont.

Year	Donator	Area	Donations
before 1929 ⁵⁵	Witold Sławiński	the Zielone Jeziora (now: Žalieji ežerai, Lithuania) area	flowering plants (800 species)
	Irena Sokołowska	Międzyrzecz in the Rudnicka (now: Rūdninkai, Lithuania) Ancient Forest	flowering plants (400 species)
	Helena Krzyżanowska	surroundings of Nowe Święciany (now: Švenčionėliai, Lithuania)	flowering plants (300 species)
	Zofia Fiedorowiczówna	the Dzisna (now in Belarus) district	zoocecidia (120 species)
	Józef Trzebiński, Konstanty Prószyński	north-eastern Poland	fungi
1928–1929 ⁵⁶	no data	no data	vascular plants, pathogenic fungi
	no data	no data	mountain plants
	no data	no data	relict plants
1929–1930 ⁵⁷	Józef Trzebiński	lakes near Troki (now: Trakai, Lithuania)	plants from peat bogs and lakes
	no data	no data	lichens (400 species)

⁵⁵ Rydzewski 1929, pp. 334–335.

⁵⁶ LCVA I Ab 391.

⁵⁷ LCVA VII B 52.

Table 4 cont.

1930–1931 ⁵⁸	F. Majer	Tatry Mts.	no data
	M. Sz mukler	surroundings of Włodzimierz Wolyński (now: Volodymyr-Volynskyi, Ukraine)	no data
	Janina Perepeczkówna	surroundings of Oszmiana (now: Ashymany, Belarus)	zoocecidia
	no data	no data	didactic collection of more important flowering plants and spore ones
	no data	no data	preserved specimens (wet and dry) (100 pieces) and microscopic preparations (several dozen)
1931–1932 ⁵⁹	Janina Perepeczkówna	surroundings of Oszmiana	zoocecidia
	Nadzieja Rojecka	the Karaim cemetery of Troki	flowering plants
	Józef Trzebiński	Dalmatia	flowering plants
	no data	the University Botanical Garden	geobotanical collection of plants
1933–1934 ⁶⁰	Ita Frydmanówna	surroundings of Zamość	flowering plants
	Ryszard Kruszyński	surroundings of Lida (now in Belarus)	parasitic fungi

⁵⁸ LCVA VII B 52.⁵⁹ LCVA VII B 52; VII B 52.⁶⁰ LCVA I Ab 314; VII B 48.

Table 4 cont.

Year	Donator	Area	Donations
	Jadwiga Matuszkiewiczówna	surroundings of Vilna	algae ⁶¹
	Edward Ząbek	surroundings of Pińsk (now: Pinsk, Belarus)	flowering plants
1934–1935 ⁶²	Lidia Anisimowiczówna	the Sokółka district	flowering plants
	Irena Rutkowska	Warszawa and Pomorskie voivodeships	zoocecidia
	Andrzej Michalski	Vilna, Nowe Troki and surroundings	lichens, parasitic fungi
1935–1936 ⁶³	Feliks Krawiec	surroundings of Poznań	lichens (gift of the Poznań University)
	Zinaida Sinicynówna	surroundings of Nieśwież (now: Nyasvizh, Belarus)	collection of peat plants
	Maria Kostrowicka	surroundings of Brześć nad Bugiem and Kobryń (now: Brest and Kobryn, Belarus)	mosses
	Gienia Szulmanówna	surroundings of Dolhinów (now: Daūhinava, Belarus)	flowering plants
	Zuzanna Gołębówna	surroundings of Druskienniki (now: Druskininkai, Lithuania)	flowering plants
	Andrzej Michalski	surroundings of Vilna	slime moulds
1938–1939 ⁶⁴	no data	surroundings of Vilna	collection of meadow and pasture plants

⁶¹ LCVA I Ab 314.

⁶² LCVA VII B 52.

⁶³ LCVA VII B 52.

⁶⁴ LCVA VII B 198.

In 1931, the Natural History Museum of the Stefan Batory University came into being and housed mainly zoological, geological, palaeontological specimens, and only some herbaria, plant drawings, and photographs of plant life of the Vilna province.⁶⁵

2.4. Botanical Garden

Botanical Garden, organized in the years 1919–1920, was presented in the paper *Historia Ogródu Botanicznego Uniwersytetu Stefana Batorego w Wilnie (1919–1939)*.⁶⁶

3. Research activities

3.1. General characteristics

The initial decades of the 20th century were characterized by an increased rate of development in the field of biological science, including botany. The development pertained to both laboratory studies in the areas of anatomy, cytology, and physiology of plants, as well as to the studies combined with field research – taxonomy, geography of plants (phytogeography), palaeobotany, and ecology (including phytosociology).⁶⁷ These developments were only scarcely reflected in Polish science.⁶⁸ The flora of Central and Eastern Europe, including the region of Vilna, and particularly the lower plants and fungi were still poorly known. The Vilna centre of botany was clearly associated with practice and served as a means to elevate the level of agriculture and medical care in the north-eastern borderlands of the then Poland. The studies into the history of botany in Vilna were the signs of interdisciplinary interests and of the past of the University. The Vilna botanists stayed in touch with other Polish research centres, e.g. with the Jagiellonian University operating continuously since 1364, as well as with younger universities, e.g. the University of Warsaw, and the Major School of Rural Economy in Warsaw. They participated in the work of the Polish Botanical Society, established in 1922, and organized its

⁶⁵ LCVA I Ab 311, I Ab 314, I Ab 391; VII B 52; VII B 229; 1(IA) 919.

⁶⁶ Zemanek, Köhler [2016](#).

⁶⁷ Mägdefrau 2004, pp. 274–280, 328–331; Morton 1981, pp. 448–466; Zemanek 2011.

⁶⁸ Hryniewiczcki 1949, pp. 120–126; Kosiek 1983, pp. 455–470; Paszewski 1973.

four national conventions in Vilna (5th Convention – 23–24 May 1926, 7th Convention – 8–10 June 1928, 13th Convention – 29 June–1 July 1934, and 18th Convention – 27–29 May 1939).⁶⁹ Foreign contacts included trips to conferences, and – in single cases – longer stays abroad, e.g. Witold Sławiński (France, Paris, 1923–1924),⁷⁰ Bronisław Szakien (Belgium, Leuven, 1925–1926 and 1935),⁷¹ and Wacław Strażewicz (Hungary, including Budapest, and Austria, Vienna, 1936–1937).⁷² Franciszek Ksawery Skupieński was a member of Société Botanique de France.⁷³

3.2. More important publications

Initially, the rate of scientific work measured by the annual number of publications was low, but it accelerated during the 1930s. A total of approx. 300 works were published, including about 100 scientific papers dealing with several specialties (Diagram 1). A great number of these

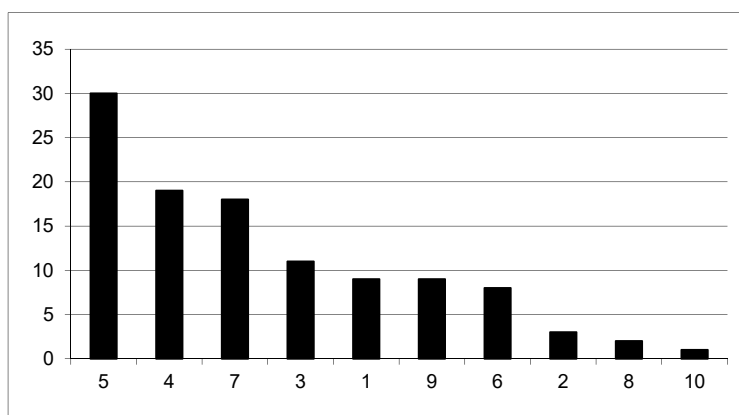


Diagram 1. Numbers of papers in particular specialties. 1 – morphology, anatomy and cecidology, 2 – cytology, 3 – physiology, 4 – floristics and systematics of vascular plants, 5 – mycology and phytopathology, 6 – phytosociology, 7 – useful and medicinal plants, 8 – ethnobotany, 9 – history of botany, 10 – palaeobotany.

⁶⁹ LCVA I Ab 314, I Ab 391, I Bb 59, VII B 52, VII B 198.

⁷⁰ LCVA VII B 57, 1 (I Bb) b 898.

⁷¹ LCVA I Bb 637, VII B 265.

⁷² LCVA 1 (I Bb) 52.

⁷³ Konarski 1998; WG 2015.

are rare prints now, available in single copies. The results of scientific studies were generally published in Polish, with brief summaries in German or French. Most of the papers were published in the local journal *Prace Towarzystwa Przyjaciół Nauk w Wilnie. Wydział Nauk Matematycznych i Przyrodniczych* and in the nationally circulated *Acta Societatis Botanicorum Poloniae*. Few papers were published in foreign languages, particularly in German, principally in the latter periodical, and even fewer in journals abroad. Some of the research subjects initiated by the botanists during their employment in the University were concluded only after the Second World War and published in other Polish journals.

3.2.1. Morphology and anatomy – zoocecidiological research

Additionally, there were studies conducted in cecidology, a science on the border between botany, zoology, and phytopathology. Cecidia are abnormal outgrowths on various plant organs induced by foreign organisms such as insects or nematodes. The above subject matter, which had been studied for many years, had economic significance, because it revealed potential threat to cultivated plants.⁷⁴ The research of cecidia in the Vilna region was among the first such studies in Polish botany.⁷⁵ Examples are provided by the works of Wiśniewski's students – Zofja Fiedorowiczówna,⁷⁶ Olga Kotlarówna,⁷⁷ and Leia Wolpjanówna.⁷⁸

3.2.2. Cytology

Bronisław Szakien was a researcher who specialized in cytology under the supervision of Victor Grégoire (1870–1938), a cytologist and cytologist at the Catholic University of Leuven (Université Catholique de Louvain) in Belgium, during his stays in 1925–1926 and 1935. The studies on the course of nuclear division in the prophase of meiosis in royal fern (*Osmunda regalis* L.) allowed B. Szakien to find details hitherto known only from the analysis of material obtained from animals.⁷⁹

⁷⁴ Mägdefrau 2004, p. 200; Szweykowsky 2003, pp. 1015–1016.

⁷⁵ Mowszowicz 1973.

⁷⁶ Fiedorowiczówna 1931.

⁷⁷ Kotlarówna 1934.

⁷⁸ Wolpjanówna 1934.

⁷⁹ Wiśniewski 1938a, p. XXXIII.

These results were the basis for his doctoral dissertation at the University in 1927;⁸⁰ whereas, later studies on the meiotic division of nucleus in two species of horsetails (*Equisetum*) provided the basis of his post-doctoral dissertation ('habilitation') in 1937.⁸¹

3.2.3. Plant physiology

A plant physiologist Piotr Wiśniewski developed his own scientific school, primarily including the M.Sc. students of the Department of General Botany. He dealt with the dormancy period in plants and with the effects of various factors on the artificial regulation of its length. His studies on the germination of turions i.e. dormant buds in aquatic plants (e.g., water soldier *Stratiotes aloides* L.) formed in autumn, wintering at the bottoms of bodies of water, and surfacing in spring⁸² (Fig. 7a, b), were highly acclaimed by specialists.⁸³ Many of Wiśniewski's ideas

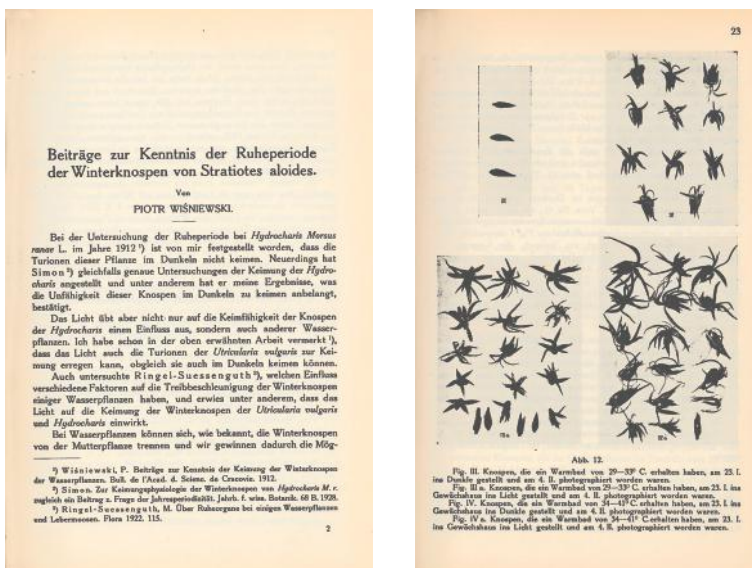


Fig. 7. *Beiträge zur Kenntnis der Ruheperiode der Winterknospen von Stratiotes aloides* (Wiśniewski, 1930): a. title-page, b. pictures.

⁸⁰ Szakien 1927.

⁸¹ Szakien 1936; 1937a.

⁸² Wiśniewski 1930.

⁸³ Kurancowa 1970, p. 66.

were implemented by his students in their M.Sc. theses, e.g., by Marja Oszurkówna,⁸⁴ and Nojma Goldmanówna.⁸⁵

3.2.4. Floristics (floristic geography of plants) and the taxonomy of vascular plants

The employees of the University undertook the studies of flora (i.e. species occurring in a given area) and vegetation (i.e. plant communities – the works on the latter topic were classified in the field of phytosociology, see below), concentrating particularly on the nearest territory of the Vilna region.⁸⁶ Several dozens of papers of various grades, from short floristic notes to more voluminous monographs of tens of pages (regional floras), were published. For example, Witold Sławiński published a monograph on the flora and vegetation of the Zielone Jeziora (now: Žaliejų ežerai, Lithuania) region near Vilna⁸⁷ (Fig. 8a, b, c). Jakub Mowszowicz, phytogeographer and phytosociologist, was one of the most active researcher of vegetation cover, working for 15 years without pay as an Assistant Lecturer-Volunteer, while earning his living as a teacher.⁸⁸ His doctoral dissertation, on the Ponary Mountains (now: Paneriai in Vilnius) and its neighbourhood,⁸⁹ defended in 1936, was a floristic-phytosociological monograph containing lists of both vascular plants, as well as mosses, liverworts, fungi, and lichens. Summing

⁸⁴ Oszurkówna 1929.

⁸⁵ Goldmanówna 1931; 1933.

⁸⁶ Mowszowicz 1959, p. 5.

⁸⁷ Sławiński 1924.

⁸⁸ Jakub Mowszowicz, who was of Jewish origin, had dramatic fates during the II World War. Initially, he worked at the Lithuanian University, but after Vilna was occupied by the German Nazi army, he was moved to the Vilna ghetto in July 1941 (Mowszowicz 1968, p. 245). In 1943, after all his family was murdered in front of his eyes, when digging a grave for himself as ordered by a Nazi, he succeeded to escape. He survived until the end of the German occupation, hidden by female colleagues from the University. Many years later, he wrote about it in the following words: “[...] Thanks to the endeavors of a noble lady [...] Anna Niekrasz, after long searches and vicissitudes, I have found shelter and care in our common colleague from the University, Weronika Milewska, where I can survive the last ten months of the dark night of Nazi occupation. I wish to pay here my great homage to my Polish colleagues – who came to the rescue of their co-worker irrespective of his origin” (Mowszowicz 1976a).

⁸⁹ Mowszowicz 1937a; 1938a.

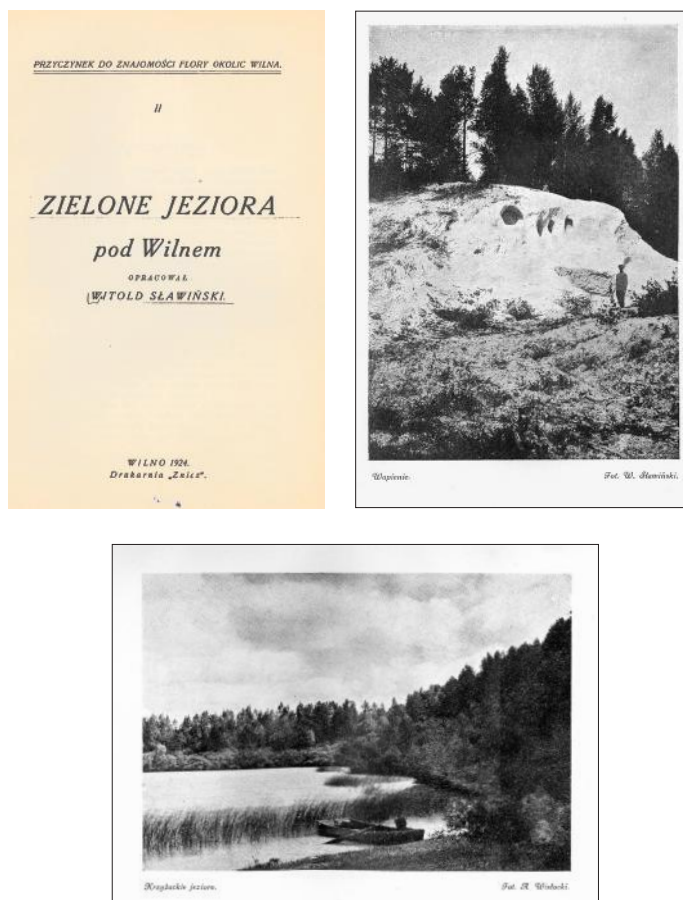


Fig. 8. *Zielone Jeziora pod Wilnem* (Sławski, 1924): a. title-page, b. photo after the page 20, c. photo after the page 178.

up the research to date conducted in the Vilna region, it contained a list of vascular plants together with the list of all known localities.⁹⁰ Unfortunately, the publication, dated in 1938, covered only a part of the edited text, the rest of it was lost during war.⁹¹ Many years later,

⁹⁰ Mowszowicz 1938c.

⁹¹ J. Mowszowicz wrote about it in the 3rd part of *Conspectus...*, 1959 (see below), on p. 5, whereas on p. 96 provides the following reference to this work: *Wskaz roślin naczyniowych Wileńskiego z wyszczególnieniem dotyczącym podanych stanowisk* (Pteridophyta, Gymnospermae, Angiospermae, Monocotyledones, Dicotyledones do Rosaceae) [List of vascu-

J. Mowszowicz restored this work in an extended version in the form of a three-part monograph, which constituted the basis for his post-doctoral dissertation ('habilitation') at the Łódź University.⁹² It is one of the more important syntheses pertaining to the studied area, and it still serves as a reference point to any floristic-phytogeographic considerations.

3.2.5. *Mycology and phytopathology*

A record in mycology and phytopathology was among the greatest achievements of the Vilna centre. Phytopathology, a science of diseases in plants, has a wider scope than mycology, but in the Vilna centre, the work concentrated mainly on fungal diseases. Several dozens of studies of diversified volumes were published, and some of them were pioneer works in this part of Europe. One of the leading mycologists was Józef Trzebiński, who was regarded as one of the joint creators of Polish phytopathology.⁹³ The classic item in the list of Trzebiński's publications was his textbook *Choroby roślin: Ogólna fitopatologia* (Diseases in plants: General phytopathology)⁹⁴ (Fig. 9a, b). Konstanty Prószyński, another experienced mycologist, was the author of the list of higher fungi of the *Hymenomycetes* order, classified within the *Basidiomycetes*, collected in the neighbourhood of the town of Troki (now: Trakai, Lithuania) (with the descriptions of eight new species)⁹⁵ (Fig. 10a, b, c). Unfortunately, the work of his life, devoted to fungi, was not published, and disappeared in unknown circumstances.⁹⁶ Piotr Wiśniewski described it in the following words:

He prepared and left in manuscript an exhaustive work, containing detailed descriptions in Latin of the numerous fungal species he found, including many credited as new species. The manuscript was accompanied by an atlas of these fungi, which contained several thousands of colour tables

lar plants of Vilna and its vicinity including all known localities (*Pteridophyta*, *Gymnospermae*, *Angiospermae*, *Monocotyledones*, *Dicotyledones* – till *Rosaceae*), published by the Department of General Botany, Vilna 1938, pp. 1–160.

⁹² Mowszowicz 1957; 1958; 1959.

⁹³ Majewski 2016, pp. 120, 251; Köhler, Majewski 2016.

⁹⁴ Trzebiński 1930a.

⁹⁵ Prószyński 1931.

⁹⁶ Some of the drawings he made were recently found in collections of Vilnius University (Rukšėnienė, Jonynaitė 2006).

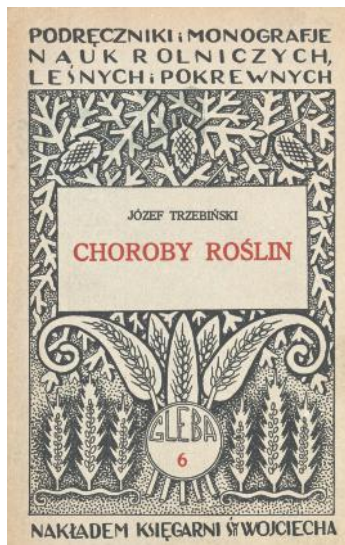


Fig. 9. *Choroby roślin: Ogólna fitopatologia* (Diseases in plants: General phytopathology) (Trzebiński, 1930a): a. cover, b. page 123.

drawn with by the talented author. [...] For many years he strived to publish a major work [...] and a tragedy of his life that accelerated [...] his death was the impossibility to publish it because of great cost of such a publication.⁹⁷

Bronisław Szakien studied parasitic rust fungi.⁹⁸ Ryszard Kruszyński published, among other works, a critical review of plant diseases observed in north-eastern Poland.⁹⁹ Andrzej Michalski was the author of, *inter alia*, an article on parasitic fungi found in the area of Vilna-Troki,¹⁰⁰ and on lichens,¹⁰¹ as well as the first-ever Polish study of lichenicolous fungi.¹⁰² Franciszek Skupieński conducted studies on the ecology of several species of myxomycota (slime moulds) jointly with Andrzej Michalski and Irena (Malinowska-) Michalska.¹⁰³

⁹⁷ Wiśniewski 1938b.

⁹⁸ Szakien 1929; 1935; 1937b.

⁹⁹ Kruszyński 1938; Majewski 2016, p. 120.

¹⁰⁰ Michalski 1936.

¹⁰¹ Michalski 1935.

¹⁰² Michalski 1937.

¹⁰³ Michalska, Skupieński 1938; Michalski, Skupieński 1939.

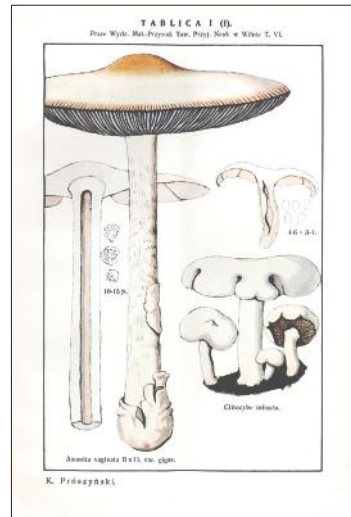
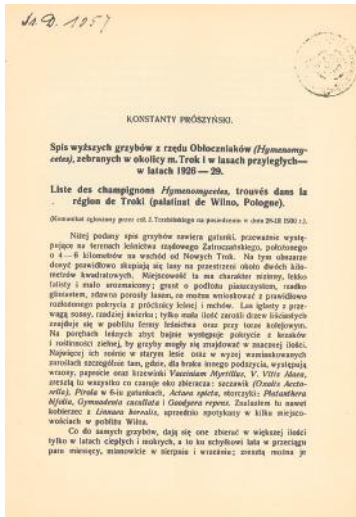


Fig. 10. *Spis wyższych grzybów z rzędu Obolozniaków (Hymenomyces) [...] Liste des champignons Hymenomyces [...]* (Prószyński 1931): a. title-page, b. tab. I, c. tab. IV.

3.2.6. Ecology of plant communities (phytosociology)

The dynamic development of ecology was also reflected in the activities of Vilna botanists. The majority of studies was devoted to the ecology of plant communities (synecology) and employed the methodology

of the French-Swiss phytosociological school of Josias Braun-Blanquet (1884–1980), introduced into Poland in 1923 by botanists from Kraków.¹⁰⁴ Trzebiński¹⁰⁵ wrote the chapter on the vegetation of the Vilna region, included in the collective work *Wilno i Ziemia Wileńska* (Vilna and the Vilna region).¹⁰⁶ His voluminous work *Flora jezior Trockich* (The flora of Troki lakes) also included a description of plant communities, prepared for printing in the series *Krajobrazy roślinne Polski* (Vegetational landscapes of Poland), published by Zygmunt Wóycicki, was unfortunately destroyed during the Second World War in the printing house of the Warsaw Scientific Society.¹⁰⁷ The other important phytosociological studies which should be mentioned were the works by Irena Sokółowska-Rutkowska on the Rudnicka (now: Rūdninkai, Lithuania) Ancient Forest,¹⁰⁸ Zinaida Sinicynówna on peatlands near Nieśwież (now: Nyasvizh, Belarus),¹⁰⁹ as well as the study by Sergiusz Macuk concerning the area of Koziany, a small town in the Braslaw district (now: Kazyany near Braslaŭ, Belarus).¹¹⁰

3.2.7. Studies on useful plants

The studies on useful plants, chiefly medicinal, were conducted by Jan Muszyński and his disciple Waclaw Strażewicz. They played a great role in the development of Polish herbal medicine, as well as on the acclimatization of species of foreign origin. Their studies were included in the range of pharmacognosy and were only partly related to botany. These two authors also published a monograph on the history and use in Poland of an oil-providing plant – soya bean (*Glycine max*), originating from Asia.¹¹¹ They also conducted breeding work in the Garden of Medicinal Plants, e.g. they bred a new variety of soya bean of high oil content that they named ‘Vilna soya bean’, which later was commercially traded.

¹⁰⁴ Zemanek *et al.* 2010, pp. 76–77.

¹⁰⁵ Trzebiński, working jointly with Edward Strumpf, was the author of the Polish translation of the classic work by the pioneer of ecology and phytosociology Eugenius Warming *Plant communities* (1900), whose editions were published in many languages.

¹⁰⁶ Trzebiński 1930b.

¹⁰⁷ Köhler, Majewski 2016, p. 53.

¹⁰⁸ Sokółowska-Rutkowska 1933.

¹⁰⁹ Sinicynówna 1936.

¹¹⁰ Macuk 1938.

¹¹¹ Muszyński, Strażewicz 1933.

3.2.8. *Ethnobotany*

One of the important currents in the interests of Jan Muszyński was the folk knowledge of plants. He searched for active compounds in club-mosses, which he studied not only experimentally but also in the field where gathered the knowledge of their use in folk medicine. In 1927, he published an article that is now considered to be one of the most interesting ethnobotanical accounts related to the Vilna region.¹¹² It documented plants sold during St. John's fair held annually on the 24 June near the St. Andrew Church in Vilna (the article listed more than a hundred species, with their vernacular names and information on their uses).¹¹³

3.2.9. *History of botany*

After the Second World War, Witold Sławiński and Jakub Mowszowicz became historians of botany, acting simultaneously in other areas of botany. As researchers of the past, they dealt, e.g., with the history of the earlier University of Vilna, as well as with the biographies of botanists working there in the 18th and 19th centuries. The 1922 publication by Sławiński compiled the bibliography of their publications.¹¹⁴ Also published were two of his studies devoted to the life and activities of Jean Emmanuel Gilibert, a French botanist and the first Professor in Natural History in the earlier University of Vilna.¹¹⁵ After the Second World War publications included a book on Stanisław Bonifacy Jundzill, who was a pioneer of the Polish studies in floristics.¹¹⁶ After the war, Jakub Mowszowicz published many papers on the history of botany in the Stefan Batory University, which were referenced in this publication.

4. Popularization of science

Spreading the knowledge of natural science and of its practical aspects in agriculture was an important area of activity among the botanists, who published popular scientific books, articles in the press, delivered

¹¹² Petkevičius et al. 2014, p. 60.

¹¹³ Muszyński 1927. J. Mowszowicz (*Conspectus* III, p. 96) cited also a wider version of this work (J. Muszyński, *Wileńskie zioła ludowe*, Warsaw 1927, pp. 1–64).

¹¹⁴ Sławiński 1922.

¹¹⁵ Sławiński 1925–1926; 1926.

¹¹⁶ Sławiński 1947.

public lectures, and organized conferences, as well as various courses. Many years later, Maria Ławrynowicz, Professor of the Łódź University, gave the following account of Professor J. Mowszowicz's motives: "[...] Professor J. Mowszowicz treated the popularization of science as his duty as a citizen, and his mission as a scientist in the public arena".¹¹⁷

More than half of the printed output of the botanists (nearly 200 publications) were popular papers, communications and books. Józef Trzebiński, the author of many articles, was among the leading popularisers of phytopathology and mycology.¹¹⁸ Jan Muszyński published more than 100 short articles and communications aiming, among other purposes, at disseminating the knowledge of pharmacy, herbal medicine and the cultivation of medicinal plants. Jakub Mowszowicz wrote two books addressed primarily to students and teachers,¹¹⁹ and two botanical guides with keys for plant determination.¹²⁰

5. Teaching botany

The botanists were widely involved in teaching activities. They ran courses for both the students of the Faculty of Mathematics and Natural Sciences, where botanical departments were situated, as well as – to a lesser extent – for the students of the Pharmaceutical Study, initially operating at this Faculty, and in 1921 transformed into the Pharmaceutical Section of the Faculty of Medicine.¹²¹ Additionally, they also worked for the Agricultural Study, established in 1924.¹²² In particular years, Professor P. Wiśniewski delivered several courses of lectures in general botany, taxonomy, morphology, anatomy and cytology, the physiology of plants as well as the biology of reproduction. He was considered to be an excellent lecturer: "The lectures delivered by Professor P. Wiśniewski were precise, clear, well-structured, and very carefully prepared. They were magnificently supplemented by numerous tables, illustrations, and the use of epidiastope".¹²³

¹¹⁷ Ławrynowicz 2003, pp. 87–88.

¹¹⁸ E.g. Trzebiński 1925.

¹¹⁹ Mowszowicz 1937b; 1938b.

¹²⁰ Mowszowicz 1939a; 1939b.

¹²¹ Trzebiński 1929, p. 404 (28).

¹²² Rydzewski 1929, p. 288 (16).

¹²³ Mowszowicz 1966, p. 104.



Fig. 11. South-African plant *Haemanthus albiflos* Jacq. – picture by Konstanty Prószyński. Description of the picture: Fam.: Amaryllidaceae R. Br. *Haemanthus albiflos* Jacquin *Erasis Horti bot. Vilnensis*. Fl. Septembri m. usque in mediam hiemem. Terra Capensis (Reproduced by permission of the Vilniaus universiteto botanikos sodas).

In various academic years, Professor J. Trzebiński lectured principally in general botany, morphology, and the taxonomy, plant physiology, phytogeography, ecology, and phytopathology.¹²⁴ Assistant Lecturers conducted laboratory classes, courses in the Botanical Garden, and floristic trips in the Vilna area (smaller groups were travelling in the Garden-owned cart drawn by a pair of horses). K. Prószyński, a talented artist, painted many images of plants, both wild and cultivated in the Garden (Fig. 11) (there are at least 559 such paintings), and of fungi (several hundreds), which were used as illustrations during lectures and

¹²⁴ The curriculum was planned for particular years of studies: Geography of plants (Geo-botany), Genetic and floristic geography of plants – 1928/29, 1930/31, Geobotany (Geography of plants) – 1927/28, 1937/38, as above in part I. Genetic and floristic geography – 1936/37, as above in part II. Genetic geobotany (fossil plants) and floristic botany – 1932/33, Geography of plants (Geobotany), Ecological and phytosociological geography of plants – 1929/30, 1931/32, Geobotany (Geography of plants) part I. Ecology and phytosociology – 1933/34–1935/36 (based on the list of lectures).

practical studies. The number of participants of botanical courses was great. During the activity of the University, it totalled more than 2000 people (estimated with great approximation). The number of persons specializing in botany and working on theses for a degree of Master of Science was relatively low – from one to ten people in an academic year – but still it gave the sum of several dozens of such theses throughout the period of the University's activities.

6. Conclusions

The Stefan Batory University was established in 1919 and operated until 1939. Its botanical activity may be summarized in the following points:

1. The organizational basis for botany in Vilna was created. Two botanical departments were organized and one devoted to pharmacognosy and the breeding of medicinal plants, along with the Botanical Garden, the Garden of Medicinal Plants, and the Museum of Natural History.
2. The years 1919–1939 were characterized by an increasing pace of development of botany studies in the world. This development was reflected more or less at the leading Polish universities, in Kraków, Lwów, Warsaw and Poznań. Stefan Batory University, newly renovated, located in the Eastern borderlands of the state, belonged to more modest botanical centers. What prevailed was the reception of ideas from other Polish and foreign universities, among others in Belgium and France.
3. Nevertheless, research activity in Vilna included several specialties of modern botany of that time pertaining to both laboratory studies in the areas of anatomy, cytology and physiology, as well as to the studies combined with field research, i.e. floristics, taxonomy, geography of vascular plants (phytogeography), ecology (including phytosociology), mycology, phytopathology, and others. Additionally, interdisciplinary studies in ethnobotany were conducted as well as in the history of botany.
4. In this centre worked distinguished botanists, as: Jakub Mowszowicz, phytogeographer and phytosociologist; Jan Muszyński, botanist and pharmacist; Bronisław Szakien, cytologist and mycologist; Piotr Wiśniewski, physiologist; and Józef Trzebiński, mycologist and phytopathologist.

5. Publication of ca. 300 papers (including about 100 scientific ones) of which several dozens were of good scientific quality. They were published chiefly in Polish, some of them with brief summaries in foreign languages, i.e. German and French. Publications on morphological and anatomical research of cecidia and phytopathology were among the first such studies in this part of Europe. The works on the vegetation of the Vilna region are important, because they include historical data on biological diversity.
6. Stefan Batory University was a dynamic centre of teaching botany, of popularization of natural science and of phytopathology. Several dozens of people specialized in botany and obtained M.Sc. degrees. At least three scientists obtained the degree of doctors, and one – a post-doctoral degree ('habilitation').
7. The botany centre of Vilna showed a clear tendency towards practice and served to implement the idea of elevating the level of agriculture and medicine in the eastern fringes of Poland at that time.

7. Closing remarks

After Vilna was incorporated into the Soviet Union as the capital of the Lithuanian Soviet Socialist Republic, at the end of the Second World War, many of the former employees of the University were deported to Poland, which had now new borders. Newly established universities needed their knowledge, experience, and courage. Some of them took part in the organization of botanical, biological, and pharmaceutical departments in the University of Łódź,¹²⁵ in the Maria Curie-Skłodowska University in Lublin,¹²⁶ Higher School of Agriculture in Szczecin,¹²⁷ and in other institutions. Some botanists continued the research that had been started in Vilna.

As a closing remark, it is worth quoting the words of Wanda Grębecka, a historian of botany:

In the countries where the continuity of work was repeatedly interrupted by changeable geopolitical conditions, the ability to transfer studies and subjects into new

¹²⁵ Mowszowicz 1968.

¹²⁶ Paszewski 1971, pp. V–VI; Salata 1995, p. 111.

¹²⁷ Köhler 2016a.

circumstances, as well as starting scientific life anew without interrupting the continuity of studies was a valuable capability, which determined success [...].¹²⁸

8. Acknowledgments

We would like to thank Dr. Audrius Skridaila, head of the Vilna University Botanical Garden, for the electronic copy of plant picture painted by Konstanty Prószyński (Proszyński).

References

ARCHIVAL SOURCES

Lietuvos Centrinis Valstybės Archyvas [Lithuanian Central State Archives] – in footnotes cited in brief: LCVA

Akta Uniwersytetu Stefana Batorego w Wilnie [Files of the Stefan Batory University in Vilna] file reference number F. 175:

- 1 (I A) 919 – Zakłady Wydz. Mat.-Przyr.: Muzeum Przyrodnicze 1928/29–1936/37.
- 1 (I A) B 955 – Protokoły posiedzeń senatu 1930–31.
- 1 (I Bb) 1013 – Akta osobowe Kazimiera Wilczyńska (z d. Urbanowicz).
- 1 (I Bb) 52 – Akta osobowe Wacław Strażewicz.
- 1 (I Bb) b 898 – Zbiór dokumentów osobowych.
- A 14 nr 299 – Akta osobowe Irena Michalska (Malinowska).
- I Ab 56 – Wydział Mat.-Przyr. 1930/31.
- I Ab 152 – Sprawozdanie roczne 1924/25.
- I Ab 311 – Sprawozdanie roczne 1930/31.
- I Ab 314 – Sprawozdania roczne 1933/34.
- I Ab 391 – Wydział Mat.-Przyr. sprawozdania 1923/24–1933/34.
- I Bb 59 – Akta osobowe Józef Trzebiński.
- I Bb 637 – Akta osobowe Bronisław Szakien.
- I Bb 784 – Akta osobowe Piotr Wiśniewski.
- VII B 48 – Nagrody za prace studenckie 1928/29–1935/36.
- VII B 52 – Sprawozdania Wydział Mat.-Przyr. 1929/30–1935/36.

¹²⁸ Grębecka 2003, pp. 69–70.

- VII B 54 – Protokoły Rady Wydziału 1920/21.
- VII B 56 – Protokoły Rady Wydziału 1922/23.
- VII B 57 – Protokoły Rady Wydziału 1923/24.
- VII B 58 – Protokoły Rady Wydziału 1924/25.
- VII B 59 – Protokoły Rady Wydziału 1925/26.
- VII B 161 – Protokoły Rady Wydziału 1936/37–1937/38.
- VII B 197 – Wydz. Mat.-Przyr. Sprawozdanie za 1937/39.
- VII B 198 – Wydz. Mat.-Przyr. Sprawozdanie za 1938/39.
- VII B 200 – Protokoły Rady Wydziału 1938/39.
- VII B 229 – Muzeum Przyrodnicze.
- VII B 232 – Wydz. Mat.-Przyr. Sprawozdania Zakładów 1936/37, 1937/38.
- VII B 265 – Habilitacja dr Bronisława Szakiena.

Bibliography

- Fiedorowiczówna, Zofja 1931: Zooecidia roślin zebrane w powiecie dziśieńskim i brasławskim Ziemi Wileńskiej. Les zooecidiés trouvées sur les plantes dans les environs des villages de Szarkowszczyzna, Pohost, Druja du district de Dzisna, province de Wilno. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 6, pp. 25–39.
- Gątkiewiczowa, Janina 1963: Profesor dr Witold Sławiński zasłużony naukowiec, pedagog i społecznik 27. XI. 1888 r. – 4. IX. 1962 r. *Wiadomości Botaniczne* 7(2), pp. 113–116.
- Goldmanówna, Nojma 1931: Wpływ czynników zewnętrznych na okres spoczynkowy kłączy paproci *Aspidium Filix mas* Sw. i *Athyrium Filix femina* R. Einfluss äusserer Faktoren auf die Ruheperiode der Rhizome der Farne *Aspidium Filix mas* Sw. und *Athyrium Filix femina* R. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 6, pp. 155–214 + tabl. I.
- Goldmanówna, Nojma 1933: Przyczynek do przedłużenia okresu spoczynkowego paproci *Aspidium Filix mas* Sw. Beitrag zur Verlängerung der Ruheperiode des Farnes *Aspidium Filix mas* Sw. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 7, pp. 139–141.
- Grębecka, Wanda 1979: L'enseignement de la botanique à l'Université de Vilna (1781–1839). *Kwartalnik Historii Nauki i Techniki* 24(3), pp. 595–610.
- Grębecka, Wanda 1998: *Wilno–Kręmemieniec. Botaniczna szkoła naukowa (1781–1841)*. Warszawa: Komitet Historii Nauki Polskiej Akademii Nauk. ISBN 83-908973-1-8 („Rozprawy z Dziejów Nauki i Techniki” 7).

- Grębecka, Wanda 2003: Wkład Profesora Jakuba Mowszowicza w historię botaniki Kresów Wschodnich I Rzeczypospolitej. [In:] K. Czyżewska, J. Hereźniak (eds). *Aktualne kierunki i perspektywy badań w geobotanice na progu trzeciego tysiąclecia. Wkład Profesora Jakuba Mowszowicza w powstanie i rozwój łódzkiej szkoły geobotanicznej*. ISBN 83-7171-665-6. Łódź: Wydaw. Uniwersytetu Łódzkiego, pp. 65–73.
- Hereźniak, Janusz; Czyżewska, Krystyna 2000: *Profesor Jakub Mowszowicz*. Łódź: Łódzkie Towarzystwo Naukowe. ISSN 1230-4328 („Sylwetki Łódzkich Uczonych” 58).
- Hryniewicz, Bolesław 1949: *Zarys dziejów botaniki*. Warszawa: Państwowy Zakład Wydawnictw Szkolnych, pp. 150.
- Jaczewski, Bohdan 1978: *Polityka naukowa państwa polskiego w latach 1918–1939*. Wrocław – Gdańsk: Zakład Narodowy im. Ossolińskich. ISSN 0077-054X („Monografie z Dziejów Nauki i Techniki” 116).
- Klimavičiūtė, Jolita 1997: Stepono Batoro Universiteto botanikos katedros (1919–1939) ir joje atliktų mokslinių tyrimų vertė botanikos mokslui Lietuvoje. *Lietuvos Jaunųjų Botanikų Darbai*, pp. 113–119. Vilnius.
- Klimavičiūtė, Jolita 1998a: *Botanikos mokslo raida Lietuvoje 1919–1943 metais*. Vilnius.
- Klimavičiūtė, Jolita 1998b: Botanikos mokslo raidos Lietuvoje 1919–1943 m. mokslometrinė charakteristika. *Botanica Lithuanica* 4(1), pp. 85–98.
- Klimavičiūtė, Jolita 2002: *Botanikos mokslo raida Lietuvoje 1919–1943 m.* (summ.: *Development of botany science in Lithuania in 1919–1943*). Vilnius: Botaniko instituto leidykla. ISBN 9986-662-19-2.
- Köhler, Piotr 1994: Zielniki botaników ośrodka wileńskiego z lat 1780–1840 w Kijowie, Krakowie i Wilnie. *Kwartalnik Historii Nauki i Techniki* 39(1), pp. 109–116.
- Köhler, Piotr 2016a: Leksykon Botaników Polskich. Dictionary of Polish Botanists. 86. Stefan Apoloniusz Kownas. *Wiadomości Botaniczne* 60(1/2), pp. 32–36.
- Köhler, Piotr 2016b: Leksykon Botaników Polskich. Dictionary of Polish Botanists. 87. Anna Niekrasz. *Wiadomości Botaniczne* 60(1/2), pp. 37–39.
- Köhler, Piotr 2016c: Leksykon Botaników Polskich. Dictionary of Polish Botanists. 89. Antonina Saturnina Lucyna Sienicka. *Wiadomości Botaniczne* 60(1/2), pp. 43–46.
- Köhler, Piotr 2016d: Leksykon Botaników Polskich. Dictionary of Polish Botanists. 90. Bronisław Szakien. *Wiadomości Botaniczne* 60(1/2), pp. 47–50.
- Köhler, Piotr; Majewski Tomasz 2016: Leksykon Botaników Polskich. Dictionary of Polish Botanists. 91. Józef Trzebiński. *Wiadomości Botaniczne* 60(1/2), pp. 51–55.

- Konarski, Stanisław 1998: Franciszek Ksawery Skupieński, (Pumski) (1888–1962). H. Markiewicz (ed.). *Polski Słownik Biograficzny*. Vol. 38, pp. 515–516. Wrocław: Wydawnictwo Zakładu Narodowego im. Ossolińskich. ISBN 83–04–00148–9.
- Kosiek, Zdzisław 1983: Botanika. [In:] *Zarys dziejów nauk przyrodniczych w Polsce*. K. Maślankiewicz (ed.), Warszawa: Państwowe Wydawnictwo Wiedza Powszechna. ISBN 83–214–0056–6, pp. 413–479.
- Kotlarówna, Olga 1934: Przyczynek do anatomji zooecidjum kwiatowego na *Phlox paniculata* L., wywołanego przez muchówki (Diptera). Ein Beitrag zur Anatomie der Galle an den Blüten von *Phlox paniculata* L., verursacht durch Dipteren. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 8, pp. 371–380 + I–II tabl.
- Kruszyński, Ryszard 1938: Krytyczny przegląd chorób roślin zaobserwowanych w północno-wschodniej Polsce w latach 1928–1937. *Rocznik Ochrony Roślin* 5(6), pp. 67–110.
- Kurancowa, Zofia 1970: Uroczystości jubileuszowe 60-lecia pracy naukowej prof. dr Piotra Wiśniewskiego. *Wiadomości Botaniczne* 14(1), pp. 65–67.
- Ławrynowicz, Maria 2003: Wkład Profesora Jakuba Mowszowicza w upowszechnianie wiedzy botanicznej w Polsce. [In:] K. Czyżewska, J. Hereźniak, editors. *Aktualne kierunki i perspektywy badań w geobotanice na progu trzeciego tysiąclecia. Wkład Profesora Jakuba Mowszowicza w powstanie i rozwój łódzkiej szkoły geobotanicznej*, pp. 87–88. Łódź.
- Macuk, Sergiusz 1938: Zespoły roślinne okolic miasteczka Koziany powiatu brasławskiego. Pflanzenvereine der Umgegend von Städtchen Koziany Kreis Brasław, Woiewodschaft Wilno. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 12, pp. 320–366 + I tabl.
- Mägdefrau, Karl 2004: *Historia botaniki. Życie i dokonania wielkich badaczy*. Wrocław [translated by M. Mularczyk, ser.: *Prace Ogrodu Botanicznego Uniwersytetu Wrocławskiego* Vol. 7(1) („Acta Universitatis Wratislaviensis” 2258)]. ISSN 0239–6661 ISBN 83–229–2523–9, pp. 357.
- Majewski, Tomasz 1982: Ryszard Kruszyński (1908–1940). *Acta Mycologica* 18(2), pp. 171–174.
- Majewski, Tomasz 2016: *Dzieje poznania chorób roślin w Polsce*. Warszawa: Wydawnictwo SGGW, Instytut Historii Nauki PAN, ISBN 978–83–7583–703–2, pp. 638.
- Michalska, Iréne; Skupieński François-Xavier 1938: Recherche écologiques sur les Acrasiées *Polysphondylium pallidum* Olice, *Polysphondylium violaceum* Bref, *Dictyosporium mucoroides* Bref. *Comptes rendus hebdomadaires des séances de l'Académie des sciences* (Paris) 207 (juillet–décembre 1938), pp. 1239–1241.

- Michalski, Andrzej 1935: Porosty (Lichenes) okolic Wilna i Trok. Die Flechtenflora (Lichenes) der Umgebung von Wilno und Troki. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 9, pp. 335–348.
- Michalski, Andrzej 1936: Grzyby pasożytnicze, zaobserwowane na roślinach dziko rosnących oraz uprawnych na terenie powiatu wileńsko-trockiego. [Verzeichnis der im Kreis Wilno-Nowe Troki gesammelten parasitischen Pilze]. *Kosmos* ser. A, 61, pp. 239–279.
- Michalski, Andrzej 1937: Grzybki pasożytnicze na porostach. Die Flechtenparasiten. *Acta Societatis Botanicorum Poloniae* 14(1), pp. 45–48.
- Michalski, André; Skupieński François-Xavier 1939: Recherches écologiques sur *Phyosarum didermoides* Rost, Myxomycète endosporé. *Comptes rendus hebdomadaires des séances de l'Académie des sciences* (Paris) 208 (janvier 1939), pp. 225–227.
- Mienicki, Ryszard 1929: Pierwsze dziesięciolecie Uniwersytetu Stefana Batorego w Wilnie. [In:] *Księga Pamiątkowa ku uczczeniu CCCL rocznicy założenia i X wskrzeszenia Uniwersytetu Wileńskiego*. Vol. II. *Dziesięciolecie 1919–29*. Wilno: Nakł. Uniwersytetu Stefana Batorego, pp. 115(1)–158(44).
- Morton, Alan G. 1981: *History of botanical science. An account of the development of botany from ancient times to the present day*. London, New York, Toronto, Sydney, San Francisco.
- Mowszowicz, Jakub 1937a: Flora i zespoły roślinne „Gór Ponarskich” i ich najbliższych okolic. Flora und Pflanzengesellschaften von Ponary und nächster Umgebung. Część I. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 11, pp. 273–283, 353–402.
- Mowszowicz, Jakub 1937b: *Szata roślinna północno-wschodniej Polski*. Wilno.
- Mowszowicz, Jakub 1938a: Flora i zespoły roślinne „Gór Ponarskich” i ich najbliższych okolic. Flora und Pflanzengesellschaften von Ponary und nächster Umgebung. Część II. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 12, pp. 248–282, 367–411.
- Mowszowicz, Jakub 1938b: *Świat przyrody żywej (hodowle)*. Wilno.
- Mowszowicz, Jakub 1938c: Wykaz roślin naczyniowych Wileńszczyzny z wyszczególnieniem dotychczas podanych stanowisk (*Pteridophyta*, *Gymnospermae*, *Angiospermae* (*Monocotyledones*)). *Prace Zakładu Botaniki Ogólnej Uniwersytetu Stefana Batorego w Wilnie*, pp. unnumbered 2 + 96 + unnumbered 2.
- Mowszowicz, Jakub 1939a: *Flora przedwiosnia i piwniosnia. (Klucz do oznaczania wczesnych wiosennych roślin zielnych)*. Wilno.
- Mowszowicz, Jakub 1939b: *Rozpoznawanie drzew i krzewów, rosnących w dzikim stanie i hodowanych w Wileńszczyźnie*. Wilno.

- Mowszowicz, Jakub 1957: *Conspectus Florae Vilnensis. Przegląd flory wileńskiej. Część I. Wstęp i flora zarodnikowa okolic Wilna*. Łódzkie Towarzystwo Naukowe, Societas Scientiarum Lodziensis, Wydział III, Sectio III, Nr 47. Łódź.
- Mowszowicz, Jakub 1958: *Conspectus Florae Vilnensis. Przegląd flory wileńskiej. Część II. Flora kwiatowa okolic Wilna*. Łódzkie Towarzystwo Naukowe, Societas Scientiarum Lodziensis, Wydział III, Sectio III, Nr 51. Łódź.
- Mowszowicz, Jakub 1959: *Conspectus Florae Vilnensis. Przegląd flory wileńskiej. Część III. Flora Wileńszczyzny*. Łódzkie Towarzystwo Naukowe, Societas Scientiarum Lodziensis, Wydział III, Sectio III, Nr 59. Łódź.
- Mowszowicz, Jakub 1966: Botanika i botanicy w Uniwersytecie Stefana Batorego w Wilnie w latach 1919–1939 (Przyczynki i wspomnienia). (Rés.: La chaire de botanique et ses représentants à l'Université de Stefan Batory à Vilna en cours de la période de 1919 à 1939). *Studia i Materiały z Dziejów Nauki Polskiej* Ser. B 12, pp. 99–124.
- Mowszowicz, Jakub 1968: Wkład botaników wileńskich w organizację łódzkich wyższych uczelni. (Summ.: Wilno University botanists' contribution to the organization of high schools in Łódź). *Studia i Materiały z Dziejów Nauki Polskiej* Ser. B 14, pp. 227–255.
- Mowszowicz, Jakub 1973: Wybrane materiały do historii zooecycidiologii Polski i ziem ościennych. (Summ.: Selected materials to the history of zooecycidiology of Poland and the adjoining lands). *Studia i Materiały z Dziejów Nauki Polskiej* Ser. B 24, pp. 79–88.
- Mowszowicz, Jakub 1976a: Anna Niekrasz (8 VII 1896 – 14 IV 1973). Wspomnienie pośmiertne. *Acta Universitatis Lodziensis, Folia Botanica*, ser. II 8, pp. 147–149.
- Mowszowicz, Jakub 1976b: Helena Peksza (13 III 1900 – 4 I 1971). Wspomnienie pośmiertne. *Acta Universitatis Lodziensis, Folia Botanica*, ser. II 8, pp. 149–150.
- Muszyński, Jan 1927: Wileńskie zioła ludowe. *Wiadomości Farmaceutyczne* 54(21–22), pp. 469–476.
- Muszyński, Jan 1934: Alkaloidy europejskich gatunków *Lycopodium*. (Alkaloide der europäischen *Lycopodium*-Arten). *Acta Societatis Botanicorum Poloniae* 11(3), pp. 277–286.
- Muszyński, Jan; Strażewicz, Wacław 1933: *Soja, jej historia, znaczenie gospodarcze, uprawa, użytkowanie oraz dotychczasowe wyniki uprawy w Polsce*. Wilno.
- Oszurkówna, Marja 1929: Wpływ czynników zewnętrznych na skrócenie okresu spoczynkowego cebulek *Oxalis Deppei* Lodd. Einfluss der äusseren Bedingungen auf die Verkürzung der Ruheperiode der Zwiebeln von *Oxalis Deppei* Lodd. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 5, pp. 195–209.

- Paszewski, Adam 1971: Profesor dr Piotr Wiśniewski w dziewięćdziesiątą rocznicę urodzin. *Annales Universitatis Mariae Curie-Skłodowska Lublin – Polonia* Sectio C 26, pp. I–X.
- Paszewski, Adam 1973: Z dziejów botaniki polskiej w ostatnim pięćdziesięcioleciu. *Wiadomości Botaniczne* 17(4), pp. 220–227.
- Petkevičius, Rolandas; Typek, Joanna; Bilek, Maciej 2014: Jan Kazimierz Muszyński (1884–1957) prekursorem badań etnobotanicznych na Litwie. *Etnobiologia Polska* 4, pp. 55–82.
- Prószyński, Konstanty 1931: Spis wyższych grzybów z rzędu Obloczniaków (*Hymenomycetes*), zebranych w okolicy m. Trok i w lasach przyległych – w latach 1926–29. Liste des champignons *Hymenomycetes*, trouvés dans la région de Troki (palatinat de Wilno, Pologne). *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 6, pp. 1–15 + tab. IV.
- Rembieliński, Robert 1957: Pamięci Jana Muszyńskiego (1884–1957). *Acta Poloniae Pharmaceutica* 14(4), pp. 241–250.
- Rukšėnienė, Jonė; Jonynaitė, Dalia 2006: *Vilniaus universiteto herbariumo senoji kolekcija*. Vilnius: Lietuvos nacionalinė UNESCO komisija. ISBN 9955-9746-7-2.
- Rydzewski, Bronisław 1929: Wydział Matematyczno-Przyrodniczy U.S.B. w latach 1919–1929. [In:] *Księga Pamiątkowa ku uczczeniu CCCL rocznicy założenia i X wskrzęszania Uniwersytetu Wileńskiego*. Vol. II. *Dziesięciolecie 1919–29*. Wilno: Nakł. Uniwersytetu Stefana Batorego, pp. 273(1)–376(104).
- Salata, Bogusław 1995: Leksykon botaników polskich. Dictionary of Polish Botanists. 15. Piotr Wiśniewski. *Wiadomości Botaniczne* 39(3/4), pp. 111–112.
- Siedlecki, Michał 1929: Wspomnienia z pierwszych dwu lat organizacji Uniwersytetu Wileńskiego. [In:] *Księga Pamiątkowa ku uczczeniu CCCL rocznicy założenia i X wskrzęszania Uniwersytetu Wileńskiego*. Vol. II. *Dziesięciolecie 1919–29*. Wilno: Nakł. Uniwersytetu Stefana Batorego, pp. 59(1)–114(56).
- Sinicyówna, Zinaida 1936: Zespoły roślinne torfowisk pod Nieświeżem. Les associations végétales de tourbières des environs de Nieśwież. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 10, pp. 115–174 + tabl. I–II.
- Ślawiński, Witold 1922: *Przyczynek do znajomości flory okolic Wilna*, cz. I. *Historja i Bibliografja*. III. Wilno.
- Ślawiński, Witold 1924: *Zielone jeziora pod Wilnem* [Przyczynek do znajomości flory okolic Wilna. II.] Wilno.
- Ślawiński, Witold 1925–1926: Dr. Jan Emmanuel Gilibert, profesor i założyciel Ogrodu Botanicznego w Wilnie. Przyczynek bio-bibliograficzny do historii Uniwersytetu Wileńskiego. *Ateneum Wileńskie* 3, pp. 8–45.

- Ślawiński, Witold 1926: Jan Emanuel Gilibert. Przyczynki do życiorysu profesora historii naturalnej i założyciela Ogrodu Botanicznego Wszechnicy Wileńskiej. *Archivum Historij i Filozofij Medycyny oraz Historij Nauk Przyrodniczych* 4 (II), pp. 233–249.
- Ślawiński Witold 1947: X. Stanisław Bonifacy Jundzill profesor Historii Naturalnej Wszechnicy Wileńskiej. The Rev. Stanisław Bonifacy Jundzill Professor of Natural History in the University of Wilno. *Annales Universitatis Mariae Curie-Skłodowska* Sectio E 1 (Supplementum), pp. 1–208 + tabl. I–XIII.
- Sokołowska-Rutkowska, Irena 1933: Zespoły roślinne Puszczy Rudnickiej w okolicy Rudnik i Żegaryna. Associations végétales de la forêt de Rudniki dans les environs de Rudniki et de Żegaryno (dép. de Vilno). *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 7, pp. 49–86.
- Sokołowska-Rutkowska, Irena 1988: Mgr Nadzieja Rojecka. *Wiadomości Botaniczne* 32(1), pp. 3–4.
- Sokołowska-Rutkowska, Irena; Piszcz, Krystyna M. 1975: Andrzej Michalski. *Wiadomości Botaniczne* 19(1), pp. 73–76.
- Szakien, Bronisław 1927: La formation des chromosomes hétérotypiques dans l'*Osmunda regalis*. *La Cellule* 38 (Volume jubilaire V. Grégoire, 3^e partie), pp. 369–394.
- Szakien, Bronisław 1929: Spis rdzy okolic Trok ziemi Wileńskiej. Aperçu des espèces de rouille provenant des environs de Troki de l'arrondissement de Wilno. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 5, pp. 211–221.
- Szakien, Bronisław 1935: Dodatkowy spis rdzy Wileńszczyzny (powiaty dziśnieński i postawski). Aperçu supplémentaire des espèces de rouille provenant de l'arrondissement de Wilno (Cantons de Dzisna et de Postawy). *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 9, pp. 139–144.
- Szakien, Bronisław 1936: Profase meiotique dans l'*Equisetum silvaticum* et l'*Equisetum palustre*. *La Cellule* 45, pp. 16–26.
- Szakien, Bronisław 1937a: Kształtowanie się chromozomów w profazie mejotycznej u *Equisetum silvaticum* L. i *Equisetum palustre* L. La formation des chromosomes dans la profase meiotique chez l'*Equisetum silvaticum* L. et l'*Equisetum palustre* L. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 11, pp. 53–71 + tabl. I.
- Szakien, Bronisław 1937b: Nowy przyczynek do znajomości rdzy Wileńszczyzny. Un nouvel aperçu sommaire de la rouille de l'arrondissement de Wilno. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 11, pp. 1–17 + tabl. I.

- Szwejkowscy, Alicja and Jerzy (editors) 2003: *Słownik botaniczny*. Wyd. II, zmienne i uzupełnione. Warszawa: Wiedza Powszechna. ISBN 83-214-1305-6.
- Trzebiński, Józef 1925: Główne podstawy nauki o chorobach roślin. (Odczyt prof. J. Trzebińskiego wygłoszony w dn. 4. III. 1925 r. w Sali Śniadeckich U.S.B. w Wilnie). *Tygodnik Rolniczy* (Wilno) 9(21–22), pp. 187–189, (23–24), pp. 203–206.
- Trzebiński, Stanisław 1929: Wydział Lekarski U.S.B. w latach 1919–1929. [In:] *Księga Pamiątkowa ku uczczeniu CCCL rocznicy założenia i X wstąpienia Uniwersytetu Wileńskiego*. Vol. II. *Dziesięciolecie 1919–29*. Wilno: Nakł. Uniwersytetu Stefana Batorego, pp. 377(1)–507(131).
- Trzebiński, Józef 1930a: *Choroby roślin. (Ogólna fitopatologia). Z licznymi rysunkami*, Poznań, Warszawa, Wilno, Lublin.
- Trzebiński, Józef 1930b: Roślinność Ziemi Wileńskiej, pp. 83–93. [In:] *Wilno i Ziemia Wileńska. Zarys monograficzny*. Vol. 1. Wilno.
- WG [Wanda Grębecka] 2015: Skupieński Franciszek Ksawery (21 XI 1888, Tum k. Łęczycy – 26 VI 1962, Łódź). B. Orłowski, scientific editor. *Polski wkład w przyrodznawstwo i technikę. Słownik polskich i związanych z Polską odkrywów, wynalazców oraz pionierów nauk matematyczno-przyrodniczych i techniki*, Vol. 4, p. 72. Warszawa.
- Wiśniewski, Piotr 1930: Beiträge zur Kenntniss der Ruheperiode der Winterknospen von *Stratiotes aloides*. *Acta Societatis Botanicorum Poloniae* 7(1), pp. 17–45.
- Wiśniewski, Piotr 1938a: †Bronisław Szakien. Wspomnienie pośmiertne – Nachruf (Z portretem – Mit Bildnistafel). *Acta Societatis Botanicorum Poloniae* 15(4), pp. XXXI–XXXVI.
- Wiśniewski, Piotr 1938b: †Konstanty Proszyński. Wspomnienie pośmiertne – Nachruf (Z portretem – Mit Bildnistafel). *Acta Societatis Botanicorum Poloniae* 15(4), pp. XXVIII.
- Wolpjanówna, Leia 1934: Przyczynek do morfologii i anatomii zoocetidjum kwiatowego *Dasyneura violae* F. Lw. na *Viola tricolor* L. Ein Beitrag zur Morphologie und Anatomie der Galle *Dasyneura violae* F. Lw. an den Blüten von *Viola tricolor* L. *Prace Towarzystwa Przyjaciół Nauk w Wilnie Wydział Nauk Matematycznych i Przyrodniczych* 8, pp. 393–405 + tabl. I–III.
- Zemanek, Alicja 2011: Historia botaniki. [In:] *Dzieje nauki. Nauki ścisłe i przyrodnicze*. M. Siwiec (ed.). Warszawa – Bielsko-Biala: Wydawnictwo Naukowe PWN. ISBN 978-83-262-0525-5, pp. 431–448.
- Zemanek, Alicja; Köhler, Piotr 2016: Historia Ogrodu Botanicznego Uniwersytetu Stefana Batorego w Wilnie (1919–1939). *Studia Historiae Scientiarum* 15, pp. 301–345. Available online: [http://www.ejournals.eu/Studia-Historiae-Scientiarum/2016/15\(2016\)/art/8051/](http://www.ejournals.eu/Studia-Historiae-Scientiarum/2016/15(2016)/art/8051/).

Zemanek, Alicja; Medwecka-Kornaś, Anna; Zdebska, Danuta; Kuta, Elżbieta; Joachimiak, Andrzej 2010: Instytut Botaniki (sum.: Institute of Botany). [In:] *Uniwersytet Jagielloński. Złota Księga Wydziału Biologii i Nauk o Ziemi, Część II: Historia instytucji. Jagiellonian University. The Golden Book of the Faculty of Biology and Earth Sciences, Part II: History of the institutes.* A. Zemanek (ed.), Kraków: Uniwersytet Jagielloński, Księgarnia Akademicka. ISBN 978–83–7188–658–4, pp. 59–138.